

# RMP

## ROLLFAB

M E T A L P R O D U C T S



# Installation Manual AP400

# INTRODUCTION

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AP400 is an Aluminum Plate drain/back ventilated rainscreen panel system. AP400 is easy to install and only requires standard installation tools. AP400's versatility makes it adaptable to many other standard systems that are available from a variety of vendors, including r/o & return systems, glazed-in systems and creative custom systems. In addition, you can create complex assemblies with AP400 in with support systems attached with structural adhesives.

This "How To" Manual has been developed to assist new installers with installation of simple standard AP400 panels in the most efficient and effective manner. The tips and suggestions contained in this manual are the result of many years of combined experience by installers in both the U.S. and abroad. These recommended suggestions are based on information which is, in our opinion, reliable. However, since skill, judgment, and quality of installation, equipment, and tools are involved, and since conditions and methods of installing Aluminum Plate materials are beyond our control, the suggestions contained in this manual are provided with-out guarantee. We recommend that prospective users determine the suitability of both the material and suggestions before adopting them on a commercial scale.

**ROLLFAB METAL PRODUCTS DOES NOT MAKE ANY WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR PURPOSE, WITH RESPECT TO ANY SAID SUGGESTIONS AND PRODUCT DATA.** In no event shall Rollfab Metal Products, have any liability in any way related to or arising out of said suggestions and product data for direct, special, consequential or any other damages of any kind regardless whether such liability is based on breach of contract, negligence or other sort, or breach of any warranty, express or implied. Also, normal safety and health precautions practiced in any fabricating environment should be used when fabricating Aluminum Plate materials. Goggles or other face protection, as well as hand protection should always be worn. MSDS for Aluminum materials are available through our Customer Service Department.

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# Section I: Pre-Installation Guidelines



**WARNING: FAILURE TO FOLLOW THESE GUIDELINES  
WILL VOID THE STANDARD WARRANTY.**



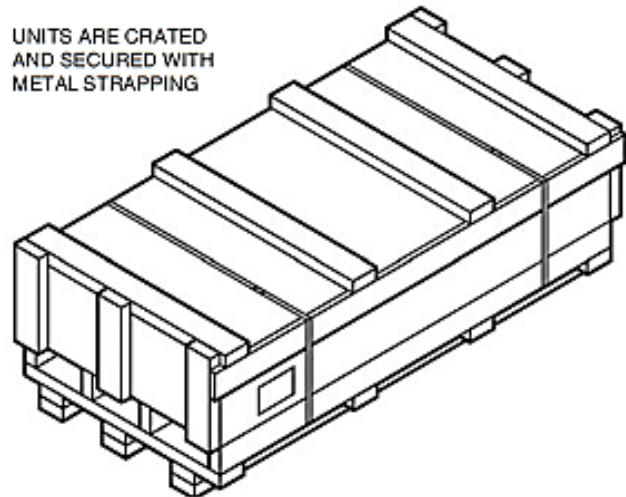
BE SURE TO READ, UNDERSTAND AND FOLLOW ALL GUIDELINES. Manufacturer guidelines may vary depending upon specific application and project conditions. The manufacturer should be contacted with questions regarding conditions which vary from the guidelines set forth. Standard carpentry knowledge is required and good construction practice for health, safety and welfare must be followed when fabricating Aluminum Plate. Rollfab Metal Products offers these recommended guidelines based upon current product information and accepts no responsibility for the conditions and/or methods of fabrication.

## Material Receiving & Inventory:

### VISUAL INSPECTION:

Upon material arrival, all panel units and accessory cartons should be visually inspected to verify that the product is in good condition and free from shipping damage, weather damage or defects.

- IS THE PRODUCT IN GOOD CONDITION?
- IS THE PRODUCT FREE FROM DEFECTS?
- IS THE PRODUCT CLEAN AND DRY?
- ARE ALL OF THE PANEL UNITS PRESENT?
- ...THE ACCESSORY UNITS?
- IS THE PIECE PER UNIT COUNT CORRECT?



- Shipping damage and packaging issues should be noted on the bill of lading and immediately reported to manufacturer.
- Customers are responsible for filing freight claims with the shipping company **WITHIN 24 HOURS** of receiving materials. Failure to do so may result in forfeit of corrective actions.
- Any defective material must be reported directly to the manufacturer.

## Transporting & Handling:

AP400 panels should be transported by means of a forklift with the proper length forks or extension in the original / sealed packaging until processing of the material is ready to begin. If a forklift is unavailable, planks may be lifted and carried by hand per the following guidelines.

## **Storing Material:**

AP400 panels do not have a strippable protective film on the painted surface as AP400 is a post finished product, therefore extra care should be taken when transporting and handling AP400 panels to avoid scratches and denting which can damage the products finished surface.

- When handling product, clean work gloves should always be worn to protect hands from being cut on the sharp edges.
- DO NOT drag nor slide product at any time while handling it. Product must be directly lifted away from contacting surfaces to avoid damage to the painted surface.

AP400 panels must be kept in a dry well-ventilated area away from exposure to all elements including natural and construction based during storage, failure to do so may result in damage to the finished surface. Such damage is NOT covered under warranty.

AP400 panels can be stored either horizontally or vertically per the following guidelines:

- Materials must be kept completely flat to prevent warping by means of palletizing or rack stands.
- Materials should be the same size when stacked as different sizes can cause scratching & denting.
- Materials stored vertically should be leaned into a structural rack on top of a rubber mat.

## **Scheduling & Grid Layout:**

### **COORDINATION OF WORK:**

In accordance with good construction practice, schedule the work to coordinate with other trades so that installation can proceed without significant interference/delay. Once installation has begun, work should not be delayed for long periods of time at a point which might cause damage to the product if acted upon by external conditions (i.e. rain, snow, and long periods of exposure to the sun).

### **DETERMINING THE GRID:**

Before beginning the installation procedure, it is important to plan the overall layout of the installation. Architectural drawings should be consulted to determine the correct grid layout, where applicable.

### **CALCULATE MATERIAL USAGE:**

After identifying & determining the grid layout, begin to verify that the correct amount of material has been ordered for your specific application. Since material takeoffs and resulting quantities are based upon the grid layout, installing the material in another pattern other than what has been pr-determined may result in material shortages or panels not fitting in position.

### **ALIGNING & MARKING THE GRID:**

Using the pre-determined grid pattern, establish a base point in the lower left corner or lower center/midpoint of the elevation. After installation of all dry-in materials, use a chalk line, levels, and a plumb bob to mark the complete grid (FIG. B) on the substrate/weatherproofing. Doing so will allow for any necessary adjustment to be made prior to installation.

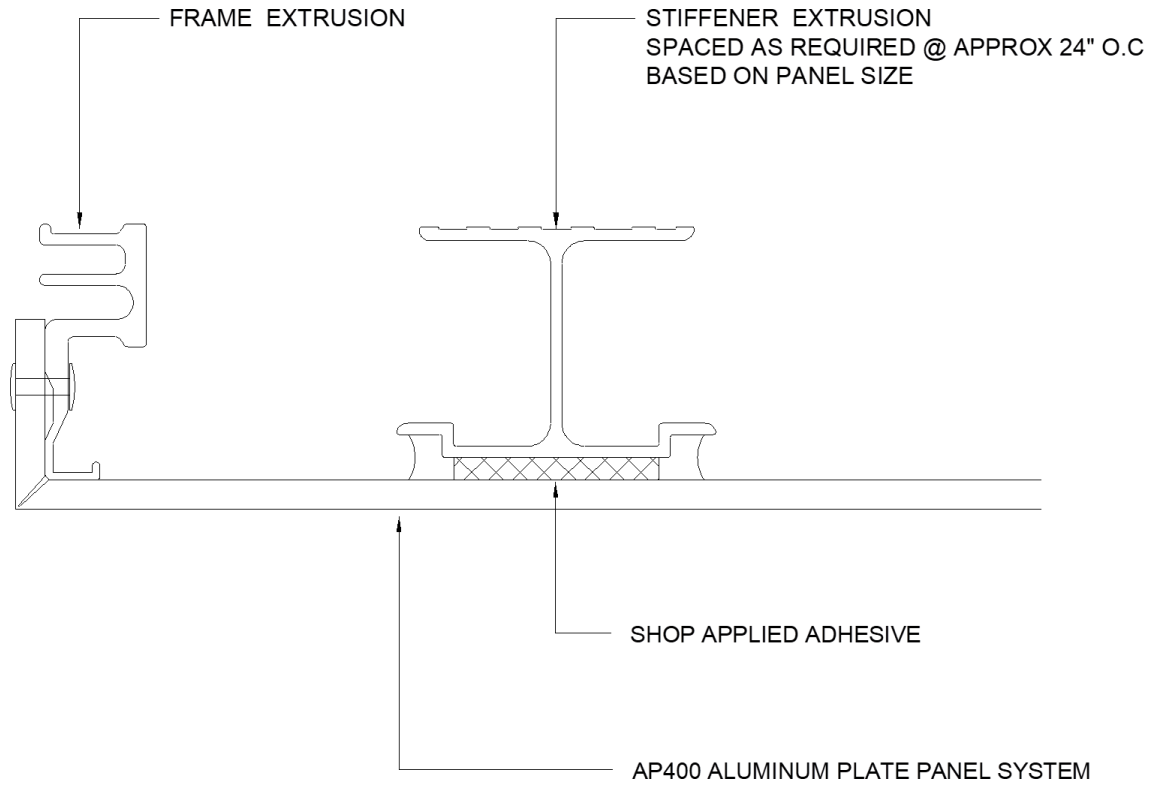
All surfaces of the substrate should be free from any obstructions and/or projections which might interfere with panel application. Note areas where shims may be required to bring the panel system into a plumb, level, and a consistent plane.

**Figure A**



# SECTION II: PANEL COMPONENTS

AP400 DRAIN BACK VENTILATED PANEL (shown w/ stiffener).



12323RS  
FRAME  
EXTRUSION



12320RS  
SILL CLIP  
EXTRUSION



12321RS  
CLIP  
EXTRUSION



12322RS  
MOD. CLIP  
EXTRUSION



12324PS  
STIFFENER EXTRUSION

## SECTION III: ASSEMBLY NOTES

### Panels

AP400 panels will arrive with the Frame and Stiffener (if required) Extrusions pre-mounted, the panels will have all necessary weep holes pre-drilled and each panel will have an angle brace mounted on the backside corners to strengthen the assembly. Each panel will be identified with a "Panel Mark" for easy placement identification. Installation Grid/Area maps will coincide with these marks.

Panel should be kept a minimum of 12" away from finished landscaping grade (refer to product warranty for information).

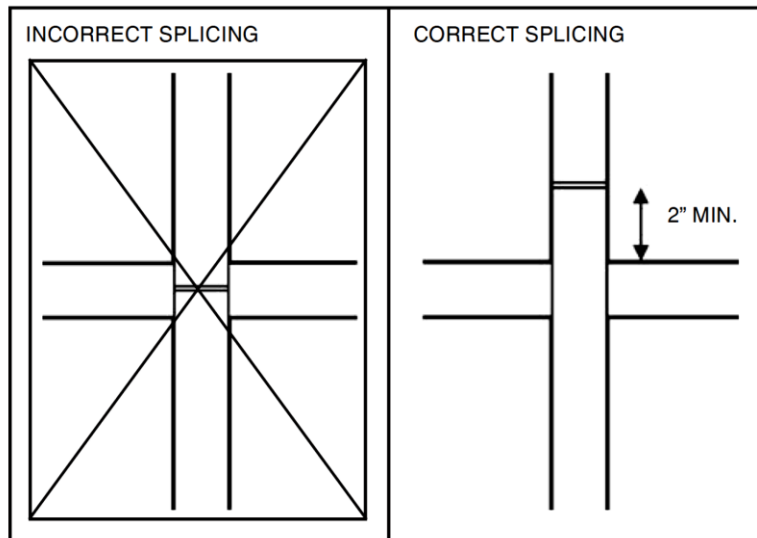
### Extrusions

Sill, Wall Clip, and Modified Extrusions should have been pre-ordered and shipped with panel assemblies

### Color Strips

Aluminum Reveal Color Strips will be shipped with panels; they will typically be of the same thickness as the AP400 panels. Color strips are 1½" wide x varied lengths (typically 120") for the standard ½" reveal system, but can be made larger up to 12" for a wider reveal feature. When installing the panels, the color strips should be installed in such a manner that the vertical strips pass through the horizontal strips as shown. (Fig. B) When cutting the strip(s) to size, approximately 1" should be added to the desired joint size to obtain the correct strip width. For example, a ½" joint would require the accent strips to be cut to a 1½" width.

**Figure C**



### Sealant

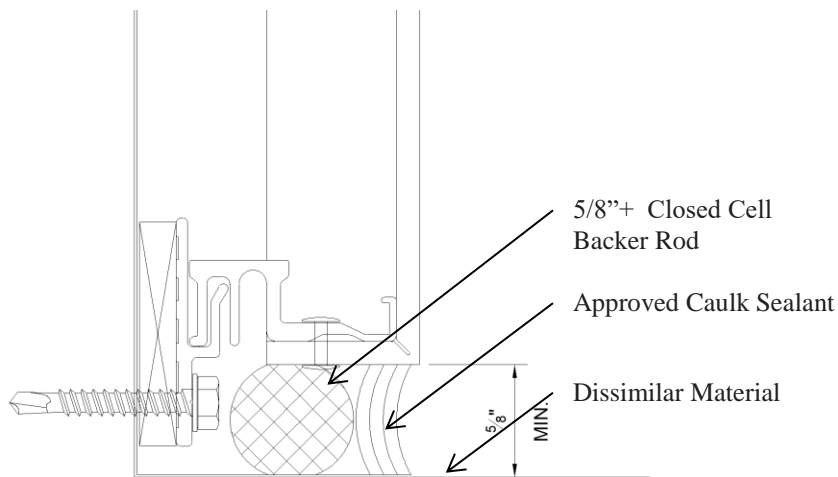
As a rainscreen principle system, AP4000 is an exterior cladding system designed to allow incidental water to enter the system and exit through weep holes. The RS System will always be applied over a moisture/air infiltration barrier (i.e. RMP SA-HT®). However, whenever the system butts up to a dissimilar material, you must allow for a sealant joint. Therefore, it is imperative that the following guidelines be followed accurately to ensure the integrity of the system against moisture intrusion. In order for the proper bond to be created between the sealant and dissimilar materials, be sure to only apply the proper recommended sealant as per the sealant manufacturer specifications (i.e.



Tremco® Spectrem® 2, Dow Corning™ 795, or GE Silpruf™). Certain sealants may require additional steps (such as priming of materials) or cause the installation to fail due to poor weathering, staining and/or lack of adequate bonding.

In general, sealant should be liberally applied wherever the system butts up to dissimilar material conditions. All such joints should have a closed cell backer rod placed into the joint (set back approximately 1/2 the width of the joint) before sealant application (FIG. C).

**Figure C**



## Protective Film

AP400 will not have a protective film in it and therefore must be handled with extra care to prevent damaging the finish.

### Note:

Failure to properly store and handle AP400 panels will void any implied finish / product warranties.

## Maintenance / Care

Panels should be incorporated into an overall building washing/maintenance schedule and cleaned in accordance with AAMA 610.1, Voluntary Guide Specification for Cleaning and Maintenance of Painted Aluminum Extrusions and Curtain Wall Panels. In general, panels may be cleaned using warm water and a mild detergent (if necessary). For more aggressive materials, a gentle brushing/scrubbing action may be required. Abrasive detergents and/or harsh solvents should not be used.

## Touch Up / Repair

Any minor scratches or dings which may occur during installation can be repaired using touch-up paint available from the fabricator. Repainting of large areas with the touch-up paint is not recommended. Finish characteristics of the repainted surface may vary from the pre-painted aluminum.

# Section IV: Installation Sequence

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STOP! READ BEFORE PROCEEDING WITH WORK SEQUENCE



These guidelines are set forth to show the intent and general sequence of installation. The procedure for each individual application and condition may vary. For special conditions or for those not discussed (parapet, dissimilar material, etc.), refer to the General Work Guidelines, Typical Details or contact the manufacturer.

## INSTALLATION SPECIFICATIONS:

### System Type:

- Non-Structural, 'rainscreen principle' System

### Work Flow:

- Progressive, moving up and across the elevation beginning at a bottom corner (typical).

### Possible Substrates:

- Nailable Substrate with Moisture Barrier
- Non-Nailable Substrate with Moisture Barrier (fastened directly to studs)

### Expansion/Contraction Spacing:

- Typical joint spacing is 1/2"-12" between abutting panels.

### Type Of Fastener (for mounting extrusions):

- #10 TEK Screw, 1-1/2" long, hex head.

### Fastening Schedule:

- Attachment Extrusions:  
Every 16" along length of molding.

### Open Cell Foam:

- Placed by the fabricator into weep holes to prevent debris/insects from getting into the cladding cavity. Weep holes should be facing downward.

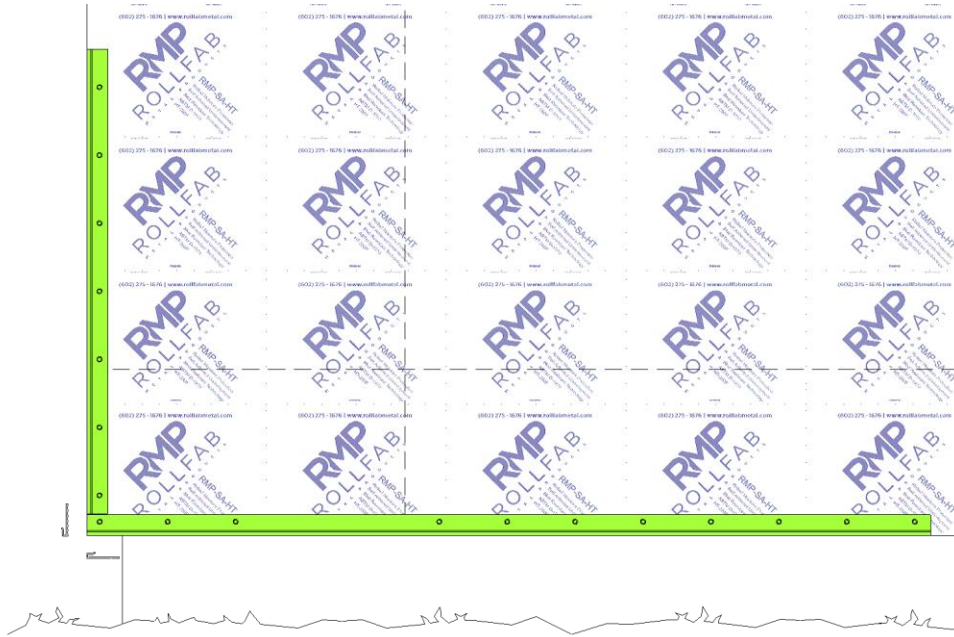
### Accent Strips:

- Placed in between mounting extrusions to close the cladding cavity, range in size from 1-1/2" for 1/2" joints to 13" for 12" joints.

## □ STEP I: Attaching The Starter Extrusion:

Since the system is progressive, installation generally starts in the lowermost corner of the elevation. Once the appropriate flashing has been installed, set spacer blocks (1/2" joint typical) on the flashing to use as a guideline for setting the first panel. Begin by peeling the protective film back from the returned edges of the panel. Then, attach the Sill or Modified Clip extrusion along the bottom & left side (if installing left to right) to the substrate, shim where required (FIG. 1).

**Figure 1**



## □ STEP II: Installing the First Panel:

Begin by sliding the edges of the first panel onto the starter extrusion (previously attached in STEP 1). Place the lower end of the starter panel into the extrusion first. For directional installation slide the panel to the left/right to fully engage the vertical extrusion once installed into the horizontal extrusion. Insert the 6" long "Wall Clips" into the top and sides of the Frame extrusions, be sure to softly seat the clips, a 1/16" gap is recommended for thermal expansion. Fasten the clips to the substrate w/ 2 - #10 x 1 1/2" self-tapping or tek point screws (FIG. 2 or 3). Completely remove the protective film.

**Figure 2**



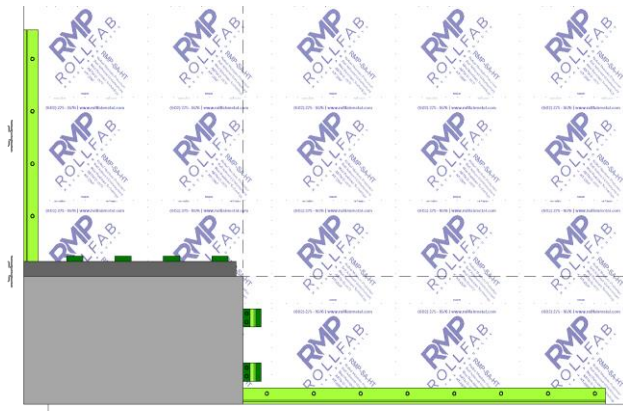
**Figure 3**



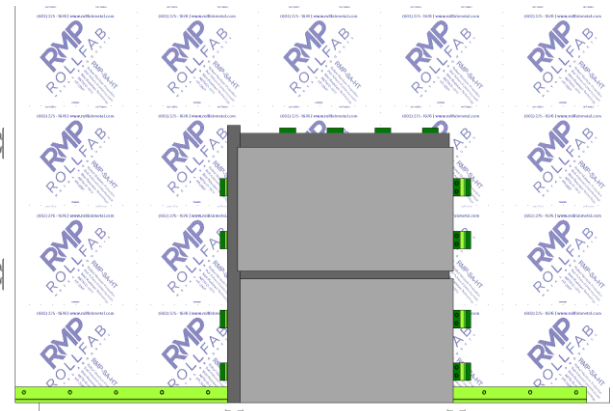
### □ STEP III: Insert the Reveal Color Strips:

At each joint, install a reveal color strip into the frame extrusions (FIG. 4 or 5) before mounting the next panel in the sequence. Verticals should pass through horizontals. The color strips are slid into the slot on the frame extrusion. The strips are not fastened, but allowed to 'float' within the extrusion. Remove the protective film completely from the color strip before placing them.

**Figure 4**



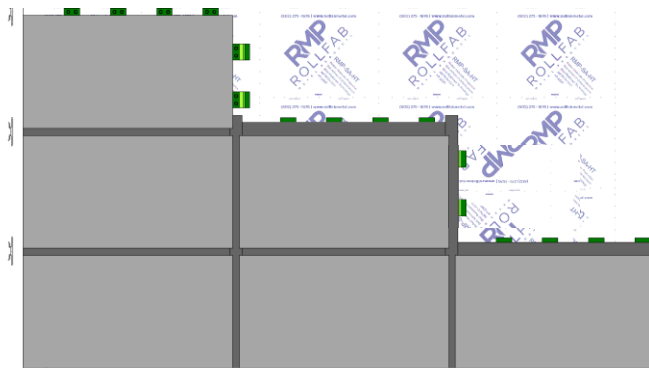
**Figure 5**



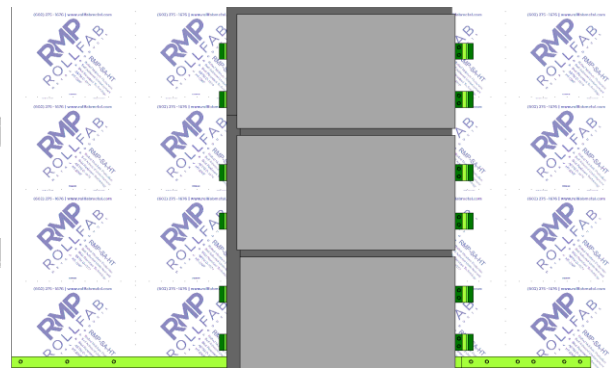
### □ STEP IV: Insert the Adjoining Panels:

Begin by placing spacer blocks (equal to the joint width) along the panel edges to create the proper spacing. Then prepare the panel for installation (repeating STEP II). Slide the next panel in the sequence over the edge of the accent strip and into the frame extrusion, then insert and fasten the wall clips to the sides and top of the panel to the substrate (FIG. 6 or 7). Then completely remove the protective film from the installed panel(s). Complete the installation by moving vertically and horizontally across the grid. It is recommended to complete the first column vertically, then move horizontally at the bottom of the elevation and begin at the next column(s). Proceed with installation until completed; trim with flashings, add backer rod, add sealant at end-wall conditions as required

**Figure 6**



**Figure 7**



## SECTION V: MATERIAL & EQUIPMENT SOURCES

### TWO-PART ADHESIVES

National Starch & Chemical Corp.  
Finderne Avenue  
Bridgewater, NJ 08807  
(908) 685-5000

Dymax Corporation  
51 Greenwoods Road  
Torrington, CT 06790  
(203) 482-1010

### STRUCTURAL SEALANT

Dow Corning Corporation  
Product Information  
P.O. Box 997  
Midland, MI 48686  
(517) 496-6000

GE Silicon Products  
260 Hudson River Road  
Waterford, NY 12188  
(800) 332-3390

Tremco Corporation  
3735 Green Road  
Beachwood, OH 44122  
(216) 292-5000

### EPOXY

Lord Corporation  
Industrial Adhesives Department  
2000 West Grandview Boulevard  
Erie, PA 16514  
(814) 868-3611

Essex Specialty Products, Inc.  
1250 Harmon Road  
Aurbin Hills, MI 48326  
(810) 391-6300

### ROUTING BLADES

Drake Corporation  
1913 North Van Buren Street  
Huntingburg, IN 47542

### MECHANICAL FASTENERS

Pro-Fastening  
8126 Zionsville Road  
Indianapolis, IN 46268  
(800) 292-7550

### COATINGS & PAINTS

AKZO Nobel  
6369 Old Peachtree Road  
Norcross, GA 30071  
(770) 662-8464

Benjamin Moore & Company  
2501 West North Avenue  
Melrose Park, IL 60160  
(708) 343-3100

PPG Coatings  
One PPG Place  
Pittsburgh, PA 15272  
(412) 434-3131

Valspar Industrial Coatings  
701 South Shiloh Road  
Garland, TX 75042  
(972) 276-5191

Sherwin Williams  
10 Midland Building  
101 Prospect Avenue  
Cleveland, OH 44115  
(800) 331-7979

### SEALANTS

Dow Corning Corporation  
Product Information  
P.O. Box 997  
Midland, MI 48686  
(517) 496-6000

GE Silicon Products  
260 Hudson River Road  
Waterford, NY 12188  
(800) 332-3390

Tremco Corporation  
3735 Green Road  
Beachwood, OH 44122  
(216) 292-5000

### ADHESIVE TAPES

3M Industrial Tape and  
Specialties Division  
3M Center Building 220-7E-01  
St. Paul, MN 55144  
(800) 362-3550

Avery Dennison  
Specialty Tape Division  
250 Chester Street  
Painesville, OH 44077  
(216) 639-2600

Mactac Technical Products  
Division  
4560 Darrow Road  
Stow, OH 44224  
(800) 323-3439

Norton Performance Plastics  
Corporation  
One Sealants Park  
Granville, NY 12832  
(800) 724-0883